

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/052778

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L27/146 H01L27/15 H01L21/329 H01L21/336 H01L21/84  
G09G3/32

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L G09G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 862 237 A (MOROZUMI ET AL) 29 August 1989 (1989-08-29) column 5, line 1 - column 7, line 15 column 6, line 15 - line 18 column 6, line 29 - line 30 column 6, line 38 - line 41 figure 5 figure 14	1,2,5,6, 10,11
X	US 5 262 649 A (ANTONUK ET AL) 16 November 1993 (1993-11-16) column 7, line 55 - column 9, line 39 column 8, line 13 - line 16 figure 1	1,5,11
	----- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

14 June 2005

Date of mailing of the international search report

23/06/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Bernabé Prieto, A

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/052778

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 634 800 A (PHILIPS ELECTRONICS UK LIMITED; PHILIPS ELECTRONICS N.V) 18 January 1995 (1995-01-18) column 6, line 46 - column 12, line 19 figure 1 -----	1,5,11
A	US 2001/052597 A1 (YOUNG NIGEL D ET AL) 20 December 2001 (2001-12-20) the whole document figures 2-4 -----	1-11
A	US 5 589 694 A (TAKAYAMA ET AL) 31 December 1996 (1996-12-31) the whole document -----	1-11

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2004/052778

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4862237	A	29-08-1989	JP 59126666 A	21-07-1984
			JP 60064467 A	13-04-1985
			JP 3135524 A	10-06-1991
			JP 3135525 A	10-06-1991
US 5262649	A	16-11-1993	US 5079426 A	07-01-1992
			AT 191977 T	15-05-2000
			CA 2127453 A1	22-07-1993
			DE 69328447 D1	25-05-2000
			DE 69328447 T2	21-12-2000
			EP 0724729 A1	07-08-1996
			JP 7502865 T	23-03-1995
			WO 9314418 A1	22-07-1993
			CA 2065246 A1	07-03-1991
			EP 1167999 A1	02-01-2002
			EP 0490997 A1	24-06-1992
			JP 3050402 B2	12-06-2000
			JP 5503770 T	17-06-1993
			WO 9103745 A1	21-03-1991
EP 0634800	A	18-01-1995	DE 69401685 D1	20-03-1997
			DE 69401685 T2	24-07-1997
			EP 0634800 A1	18-01-1995
			JP 7078954 A	20-03-1995
			US 5451766 A	19-09-1995
US 2001052597	A1	20-12-2001	WO 0199191 A1	27-12-2001
			EP 1222691 A1	17-07-2002
			JP 2003536115 T	02-12-2003
US 5589694	A	31-12-1996	JP 3347803 B2	20-11-2002
			JP 6275805 A	30-09-1994
			JP 3347804 B2	20-11-2002
			JP 6275806 A	30-09-1994
			JP 3402380 B2	06-05-2003
			JP 6275807 A	30-09-1994
			JP 3329512 B2	30-09-2002
			JP 6275808 A	30-09-1994
			JP 3403994 B2	06-05-2003
			JP 2000299454 A	24-10-2000
			US 5501989 A	26-03-1996
			US 5744822 A	28-04-1998
			JP 3405955 B2	12-05-2003
			JP 2000294798 A	20-10-2000